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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,104	10/27/2003	Shinji Uchida	00862.023280	1628

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EXAMINER

LE, DANG D

ART UNIT PAPER NUMBER

2834

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/693,104

Applicant(s)

UCHIDA, SHINJI

Examiner

Dang D. Le

Art Unit

2834

SM

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 1 is objected to because of the following informalities: claim 1, last line, replace "plurality" with – polarity --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Joong et al. (6,548,920).

Regarding claim 1, Joong et al. shows a positioning apparatus comprising:

- A movable member (6) for transmitting driving force in a driving-axis direction to a stage (Figures 2A and 2B);
- A first electromagnet (11a) for driving said movable member in the driving-axis direction by forming a magnetic path between said movable member and

said first electromagnet and generating first magnetic flux (Figure 2A, from 11a to 21b); and

- A second electromagnet (22a) which is positioned away from said first electromagnet and arranged in an overlapping direction, for driving said movable member in the same direction as the driving-axis direction of said first electromagnet by forming a magnetic path between said movable member and said second electromagnet and generating second magnetic flux (from 12b to 22a) having an inverted polarity from the first magnetic flux.

Regarding claims 2 and 3, it is noted that Joong et al. also shows all of the limitations of the claimed invention in Figure 3 with control means (column 1, lines 53-56), the first coil (phase A) and second coil (phase B).

Regarding claim 4, it is noted that Joong et al. also shows all of the limitations of the claimed invention in Figure 5 with the support (14).

Regarding claims 5 and 7, it is noted that Joong et al. also shows all of the limitations of the claimed invention in Figure 1B with the third electromagnet next to (12b).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (6,548,920).

Regarding claims 6 and 8, Joong et al. shows all of the limitations of the claimed invention except for applying currents at a ratio 1:2:1 to the coils.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply currents at a ratio 1:2:1, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

7. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joong et al. (6,548,920) in view of Yuan et al. (6,069,417).

Regarding claim 9, Joong et al. shows all of the limitations of the claimed invention except for the plurality of electromagnet units for driving a stage in XYZ directions.

Yuan et al. shows the stage apparatus for the purpose of making a semiconductor lithography machine.

Since Joong et al. and Yuan et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the plurality of electromagnet units for driving a stage in XYZ directions as taught by Yuan et al. for the purpose discussed above.

Regarding claim 10, it is noted that Yuan et al. also shows the stage in Figure 4.

Regarding claim 11, it is noted that Yuan et al. also shows the beam, the first and second optical systems, and the positioning apparatus in Figures 4 and 5.

With regard to claim 12, the method would be inherent and obvious since the prior art references meet the structural limitations of the claimed device.

Regarding claim 13, it is noted that Yuan et al. also shows the stage in Figure 4.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Information on How to Contact USPTO

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/29/05

A handwritten signature in black ink, appearing to read 'Dangle', is written over the signature line.

DANGLE
PRIMARY EXAMINER